

## CENTRAL INTELLIGENCE AGENCY

## INFORMATION REPORT

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SOURCE:

1. In May and June 1949, to aid in the taking of the city of Tsingtao, the Chinese Communists reconstructed the Tsinan - Tsingtao Railway. Communist guerrillas had removed one-half of the width of the roadbed and that half had to be replaced with a great quantity of crushed stone to make it as solid as the old half. Rail-laying took about one month to complete. At the time of "liberation" of Tsingtao, the work reached from Tsinan as far as the Wei River bridge (approximately N 36-35, E 119-20). After the Communists came into full power, the work extended from both ends of line but it progressed more rapidly from the western end because railway workers had already been mobilized in this area. In Tsingtao even railway office workers were put to work on the reconstruction of the road. Rails, which had been hidden in the surrounding hills by the Chinese Communist guerrillas, were taken out of hiding and used on the railway. Sleepers of unprocessed wood, were collected throughout Shantung. Steel work and cement were brought from Tsinan on the railway as the road was repaired. The line was opened on 3 July 1949. All reconditioning, including the bridges, had been completed before this date and had taken only two months. The reconstruction was roughly done because the prime purpose was just to get the railway running. A train could pass over the roadbed at about 10 kilometers per hour. After 3 July the Chinese Communists continued to improve the railway until it met Soviet standards in 1952.
2. The laying of the roadbed was assigned to civilians living in the surrounding villages, who were organized into teams headed by the leader of the construction section of the respective hsien. Skilled workers, who had previously reconstructed the Tientsin-Pukow line and who were headed by a commander appointed by the railway administration, came from Tientsin to lay the rails. At first the construction teams were short of supplies; therefore, instead of four, which is standard, only two "fish" bolts were used at joints in bridges. It took three months to get more materials. After the improvements made during these three months, the trains could

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travel at 30 kilometers per hour. In 1952 testing trains were brought from the Soviet Union to test the bridges. The Soviets found only one span on the Wei River bridge not up to standard. When this span had been reinforced, the speed of trains was upped to 50 kilometers per hour without any other improvements on the line.

3. Four major bridges on the Tsinan-Tsingtao line had to be reconstructed. They were over the Wen River (approximately N 36-36, E 119-18), the Wei River (approximately N 36-35, E 119-20), the Chiao River (approximately N 36-22, E 119-48), and the Taku River (approximately N 36-22, E 120-07). One repair team was assigned to each bridge, and each team was also responsible for the small bridges on either side of the larger bridges. The reconditioning of the three western bridges began before the fall of Tsingtao in June 1949, but the fourth bridge team was not organized until after the city had been captured.
4. The first step in restoring the bridges was to strengthen the buttresses with reinforced concrete. The surfaces of the bridges had steel plates, which were damaged by bombing. The damaged pieces were cut apart to use those sections that were undamaged. Later these repaired pieces were replaced by standard steel plates. The construction crews were able to salvage about 50 percent of the materials on each bridge and the remainder of the material was taken from the United States' stockpile at Hsuechow.
5. On June 1949, the railway administration officials had a conference in Tsingtao and decided that traffic should be able to pass over the line by 1 July. To accomplish this, a temporary bridge was to be put up over the Wei River because of the difficulties involved in repairing the permanent bridge. It took three days to survey the area for the temporary bridge and six days to construct the bridge, which was made from lumber taken from the old bridge and was two kilometers long. Five hundred civilian laborers from each of the three surrounding hsien, headed by the construction chief of the hsien government, were mobilized. A team was assigned to each section of the bridge; some teams finished in less than the six allotted days, but all the workers were paid for the full six days. Each laborer was given a chit showing that he had completed his work. He took the chit to his hsien and collected grain as payments.
6. At the head of each of the four bridge-repairing teams was a technical man, who was a Communist but not an engineer. There was also a temporary bridge team to build the temporary bridge over the Wei River until the more difficult permanent bridge could be built. The head of all the bridge teams was an engineer. His deputy, a Communist, took charge of personnel and supplies and acted as treasurer and accountant. The office staff consisted of government employees and temporary employees of the bridge teams, who later became permanent railway employees. The field staffs, made up of skilled workers, included woodworkers, masons, crane operators, riveters, painters, and miscellaneous workers. Each branch had a foreman who was not a Communist. Work on Wei River bridge at the peak of activities required 800 persons; the smallest bridge team had over 100 persons.
7. Not many Communist Party members were involved in the construction work. Only the deputy and the various low-level cadres in supply and personnel units were Communists, but the procedures were Communist directed. After the bridges were completed, the rating of the whole work began. The reconditioning took one month; the rating of the reconditioning took two months.
8. When the reconditioning of the line itself was completed, the reconditioning of the stations and the water towers was begun from Fangtzu to Tsingtao. These projects were let to contractors.

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9. The construction of the bridges after they had passed the Soviet tests in 1952 was as follows:
- a. The Wen River bridge had six or seven 30-meter spans. The piers were constructed of concrete. It was a deck bridge of plate girder type (d.p.g.), weight permitted was 5,000 pounds per foot of bridge (E-50), and was single tracked.
  - b. The Wei River bridge had six 30-meter spans, d.p.g., and two 40-meter spans of the through-truss type (t.w.t.). The old piers had been so damaged that completely new concrete ones had to be put in. The maximum weight was verified by the Russians at E-50 after one span failed to meet the first test and was subsequently strengthened. The spans of the bridge were in the following order counting from east to west: span 1, d.p.g.; spans 2-3, t.w.t.; and spans 4-8, d.p.g.
  - c. The Chiao River bridge had five spans, all d.p.g. The materials for two of the spans came from the United States stockpile in Hsuehchow. The other details were the same as in the other bridges.
  - d. The original bridge over the Taku River had six or seven spans. Tide water from the sea, however, blocked the flow of the Taku River, and so the Chinese Communists cut another side river or canal west of the Taku River to aid the flow of water. When the bridge was replaced, two spans were added to the bridge, which then had eight or nine spans, all d.p.g. The material for the two new spans over the canal came from the United States' stockpile. Other details were the same as in the other bridges.

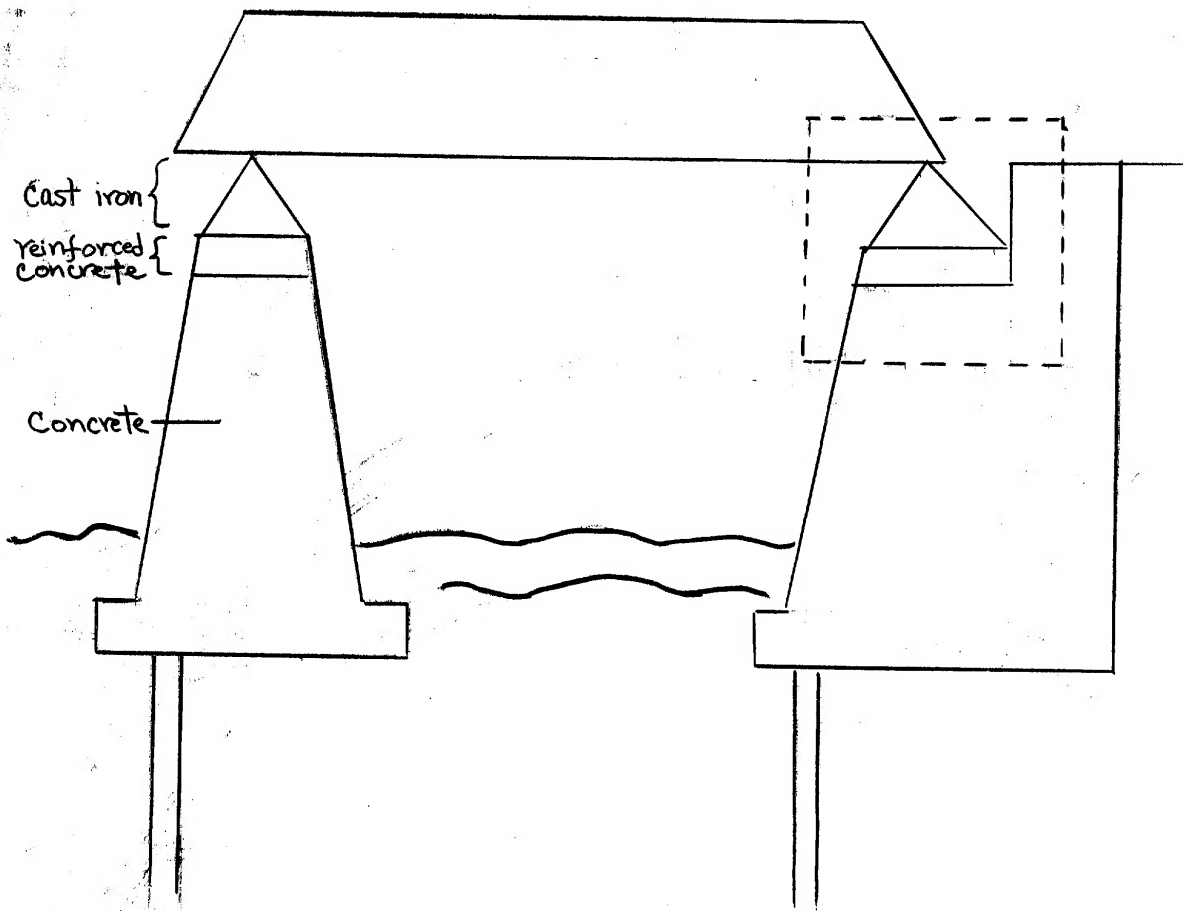
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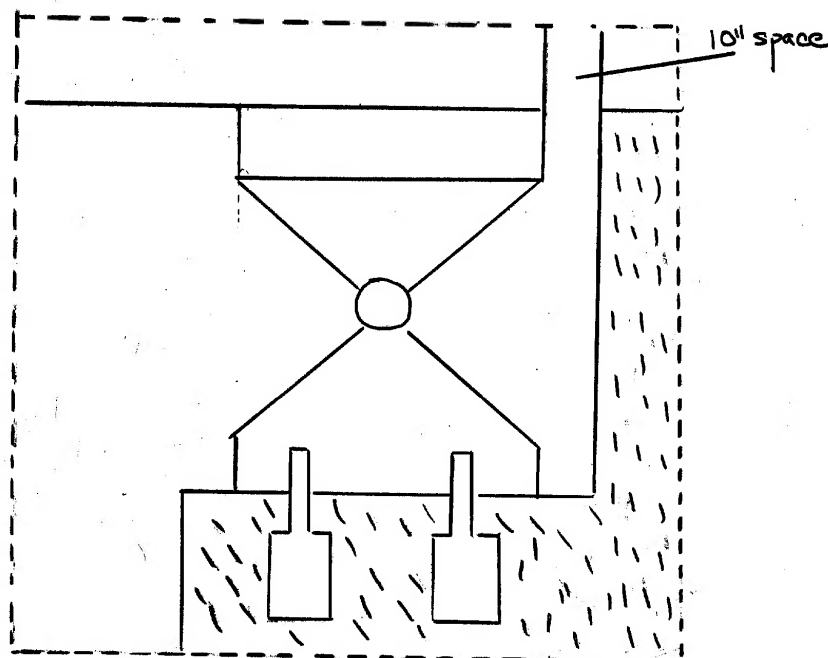
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Sketch of the Construction of Bridge Buttresses



DETAIL OF DOTTED ENCLOSURE ABOVE



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